

## **JONATHAN PERRY GARDNER**

NASA's Goddard Space Flight Center, Code 665, Greenbelt MD 20771

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### **EDUCATION:**

**Doctor of Philosophy**, Astronomy, University of Hawaii, 1992.

Thesis: "A Near-Infrared Faint Galaxy Survey: Evolution and the Cosmological Geometry From *K*-Band Photometry." Advisor: Lennox L. Cowie.

**Master of Science**, Astronomy, University of Hawaii, 1988

**Bachelor of Arts**, *magna cum laude*, Astronomy and Astrophysics, Harvard University, 1986.

Thesis: "Spacelab 2 Measurements of the Infrared Space Shuttle Glow." Advisor: Giovanni G. Fazio.

### **PROFESSIONAL EXPERIENCE:**

**Astrophysicist**, NASA's Goddard Space Flight Center, March 1999 to present.

**Program Scientist**, NASA Headquarters, April 2004 to October 2004.

**Assistant Scientist**, A.U.R.A., Hubble Space Telescope STIS Project, NASA's Goddard Space Flight Center, September 1996 to February 1999.

**NSF-NATO Postdoctoral Fellow/Senior Research Assistant**, Department of Physics, University of Durham, October 1992 to August 1996.

**Research Assistant**, Institute for Astronomy, University of Hawaii, June 1987 to September 1992.

**Teaching Assistant**, Dept. of Physics and Astronomy, Univ. of Hawaii 1986/87.

**Laboratory Assistant**, NASA – Goddard Space Flight Center, Summers, 1985 & 1986.

**Teaching Assistant**, Department of Astronomy, Harvard University, 1984/85 & 1985/86.

**Laboratory Assistant**, Department of Astronomy, Harvard University, June 1983 to August 1984.

### **PROJECT RESPONSIBILITIES:**

**James Webb Space Telescope**, Deputy Senior Project Scientist, 2002-present.

**Spitzer Space Telescope Independent Implementation Review Team**, Member, 2005-present.

**NASA – DOE Joint Dark Energy Mission Science Definition Team**, Member, 2004-present.

**James Webb Space Telescope Science Working Group**, Member, 2002-present.

**Special Assistant to the Chief Scientist of NASA**, 2004.

**Spitzer Space Telescope**, Program Scientist, 2004.

**James Webb Space Telescope**, Project Scientist for Operations, 2002-2005.

**Space Infrared Interferometric Telescope** concept study, Co-Investigator, 2004.

**Great Observatories Origins Deep Survey HST Treasury Program**, Co-Investigator, 2002-present.

**Hubble Space Telescope Parallel Working Group**, Member, 1997-2003.

**Nexus**, Deputy Project Scientist, 2000.

**Next Generation Space Telescope Ad-Hoc Science Working Group**, Member, 1997-2000.

**NGST Micro-shutter Multi-Object Spectrograph** study, Co-Investigator, 1998-1999.

**NGST Micro-mirror Multi-Object Spectrograph** study, Co-Investigator, 1998-1999.

**NGST Integrated Science Instrument Module** study, Co-Investigator, 1998-1999.

**Hubble Deep Field – South**, Co-Investigator, 1998.

**Science commissioning of AUTOFIB2/WYFFOS on the William Herschel Telescope**, PI, 1994-1995.

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### **AWARDS:**

- 2004 Goddard Space Flight Center Performance Award**  
For spearheading the work on the Dark Energy mission, and for obtaining and publishing outstanding scientific results from the GOODS survey.
- 2003 Goddard Space Flight Center Performance Award**  
For NGST NIRCам proposal activities.
- 2002 Goddard Space Flight Center Performance Award**  
For consistently high performance in publication, proposal efforts and service to the lab.
- 2001 Goddard Space Flight Center Performance Award**  
For SIRT Legacy Proposal and Nexus activities.
- 2000 Goddard Space Flight Center Special Act Award**  
In recognition of studies that have important implications for what NGST might see.
- 1992 NSF-NATO Postdoctoral Fellowship in Science and Engineering**  
In order to promote the progress of science and closer collaboration among the scientists of nations within the NATO alliance, fellowship awarded in recognition of scientific accomplishment.
- 1985 Sarah and Pauline Maier Scholarship**  
For academic achievement.
- 1983-86 Harvard College Scholarship**  
For academic achievement.

### **GRANTS:**

- 2005 Feasibility Study for a Mid-IR High Resolution Echelle Spectrograph for the Thirty Meter Telescope Project**  
Thirty Meter Telescope concept study award as Co-I. PI = Alan Tokunaga, Univ. Hawaii
- Multi-variate Optical to Infrared Luminosity Functions of SWIRE Galaxies with Measured Redshifts**  
Spitzer Space Telescope Cycle 2 Archival award as PI.
- Probing Evolution and Reionization Spectroscopically (PEARS)**  
Hubble Space Telescope Cycle 14 GO (Treasury) Co-I award. PI = Sangeeta Malhotra, STScI.
- Searching for Galaxies at  $z > 6.5$  in the Hubble Ultra Deep Field**  
Hubble Space Telescope Cycle 14 GO Co-I award. PI = Massimo Stiavelli, STScI.
- 2004 Ultraviolet Imaging of the UDF**  
Hubble Space Telescope Cycle 13 GO (Treasury) Co-I award. PI = Harry Teplitz, SSC.
- Structure of the Cosmic Infrared Background from First Look Survey Data**  
Spitzer Space Telescope Cycle 1 AR Co-I award. PI = Alexander Kashlinsky, GSFC/SSAI.
- UV properties of moderate redshift galaxies as a function of HST morphology**  
Galaxy Evolution Explorer Cycle 1 AR Co-I award. PI = Duilia de Mello, GSFC/CUA.
- Space Infrared Interferometric Telescope**  
NRA: Origins Science Mission Concept Studies award as Co-I. PI = David Leisawitz, GSFC.
- 2003 NASA-Funded Contributions to the Supernova/Acceleration Probe (SNAP) Mission**  
NASA Research Announcement 03-OSS-01-EP (Einstein Probes) award as PI.
- The Grism-ACS Program for Extragalactic Science**  
Hubble Space Telescope Cycle 12 GO Co-I award. PI = Sangeeta Malhotra, STScI.
- 2002 Pure Parallel Near-UV Observations with WFPC2 within High-Latitude ACS Survey Fields**  
Hubble Space Telescope Cycle 11 GO award as PI.
- The Great Observatories Origins Deep Survey: Imaging with ACS**  
Hubble Space Telescope Cycle 11 Treasury Co-I award. PI = Mauro Giavalisco, STScI.
- The Duty Cycle of Star Formation: Far-UV Imaging of the Hubble Deep Field**  
Hubble Space Telescope Cycle 11 GO Co-I award. PI = Harry Teplitz, GSFC/CUA.
- Cosmic Shear with ACS Pure Parallels, 2002**  
Hubble Space Telescope Cycle 11 GO Co-I award. PI = Jason Rhodes, GSFC/NRC.
- ACS Grism Parallel Survey of Emission-line Galaxies at Redshift  $z \leq 7$ , 2002**  
Hubble Space Telescope Cycle 11 GO Co-I award. PI = Lin Yan, IPAC.
- 2001 The X-ray Universe at High Redshift**  
Chandra X-ray Observatory Cycle 3 GO Co-I award. PI=Kirpal Nandra, GSFC/USRA.

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### **GRANTS continued:**

- 2001 The X-ray Emission of High Redshift Galaxies**  
Chandra X-ray Observatory Deepest Field Archival Co-I award. PI = Kirpal Nandra, GSFC/USRA.
- 1999 Star Formation in Galaxies at  $0 < z < 1.6$**   
Hubble Space Telescope Cycle 8 Archival award as PI.
- STIS Imaging of the Deep NICMOS Parallel Fields: Building on the NICMOS Legacy**  
Hubble Space Telescope Cycle 8 GO Co-I award. PI = Patrick McCarthy, OCIW.
- UV Imaging of Optical Jets: A New Window on the Physics of Extragalactic Jets**  
Hubble Space Telescope Cycle 8 GO Co-I award. PI = Stefi Baum, STScI.
- 1997 Next Generation Space Telescope Ad-Hoc Science Working Group, 1997-2000.**  
To participate in the science planning of NGST.
- Morphological and Spectral Evolution of Galaxies**  
Hubble Space Telescope Cycle 7 GO Co-I award. PI = Sara R. Heap, GSFC.
- Deep UV Imaging of the Hubble Deep Field**  
Hubble Space Telescope Cycle 7 GO Co-I award. PI = Henry C. Ferguson, STScI.
- 1993 The Royal Society Travel Grant**  
To present an invited review at a major international conference.
- 1991 University of Hawaii Graduate Student Organization Travel Award**  
To present an invited review at a major international conference.

### **EDUCATION AND PUBLIC OUTREACH ACTIVITY:**

#### **Public Affairs:**

- Organized and moderated NASA Sciences Update Media Telecon, "Astronomers Discover Planet Building is a Big Mess", 2004
- Organized Space Science Update, "Raw Ingredients for Life Detected in Planetary Construction Zones", 2004.
- Speaker in AAS press conference, "The Universe "Down Under" is the Latest Target for Hubble's Latest Deep-View", 1999

#### **Public Lectures:**

- NASA Academy, 2005
- American Institute of Physics Senior Physicists, 2005
- American Astronautical Society 43<sup>rd</sup> Goddard Memorial Symposium, 2005
- National Capital Astronomers, 2005
- Salisbury University, 2004.
- Science Fair Awards Dinner, National Capital Section of the Optical Society of America, 2004.
- Boy Scouts Troop 406, Astronomy Merit Badge Weekend, 2004.
- IBM Innovation Day 2003.
- Greater Hartford Astronomical Society StarConn, 2003.
- Johns Hopkins University Society of Physics Students, 2002.
- Anne Arundel Community College Astronomy Night, 2002.
- Washington Area Science Fiction Convention, 2002.

#### **Postdocs and Research Associates:**

- Duilia de Mello, Catholic University of America Research Associate, 2003-present.
- Jason Rhodes, GSFC NRC Resident Research Associate, 2000-2003.

#### **Students and Teachers:**

- Students United With NASA Becoming Enthusiastic About Math and Science (SUNBEAMS), teacher: Rasheki Kuykendall, 2002.
- U. S. Naval Academy Midshipman Summer Intern, Luke R. Dundon, 2002.
- Prince Georges County Summer Internship for Math, Science and Technology Teachers, Nicole Crumpler, 2000
- GSFC summer undergraduate student, Anil Kochhar, 1998-2000.
- GSFC summer undergraduate student, Sophia Khan, 1998.
- NASA/NSTA Space Science Student Involvement Program, 1998.

**Tutor & Laboratory Demonstrator**, Dept. of Physics, Univ. of Durham, 1994/95 & 1995/96.

**Teaching Assistant**, Dept. of Physics and Astronomy, Univ. of Hawaii 1986/87.

**Teaching Assistant**, Department of Astronomy, Harvard University, 1984/85 & 1985/86.

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**TRAINING COURSES COMPLETED:**

**Negotiating Techniques**, USDA Graduate School, April 2005

**Basic First Aid & Adult CPR**, NASA Safety Training Center & American Red Cross, March 2005

**Proposal Storyboarding**, Bill Taylor, March 2005

**Managing the Influence Process**, NASA Human Resources, February 2004.

**Organizational Savvy: Building Influence and Impact**, Rick Brandon, December 2003.

**The 65<sup>th</sup> Technical Management Program**, UCLA Extension, March 2003.

**Project Management Shared Experiences Program**, APPL, September 2002.

**Microsoft Access 2000**, GSFC Learning Center, April 2002.

**Principal Investigator Project Management Workshop**, John Wolfgang, GSFC, November 2000.

**Microsoft Project 98**, GSFC Learning Center, October 2000.

**Space Systems II**, Eric Hoffman, JHU/APL (ATI), July 2000.

**Space Systems I**, Vincent Pisacane, JHU/APL (ATI), June 2000.

**Electro-optical and Infrared Systems Design**, Nelson Wallace, TRW, May 2000.

**Goddard Leadership Education Series**, GSFC Human Resources, October 1999.

**PROFESSIONAL MEMBERSHIPS:**

**American Astronomical Society**, 1989-present.

**International Astronomical Union**, 2000-present.

**PUBLICATIONS:**

Please see attached.

**REFERENCES:**

Available on request.